

91-282179/39 HENKEL KGAA 09.03.90-DE-007601 (12.09 91) 801;02/20 B29b-09/06 C11d-01/72 C11d-C3/10 C11d-11 Free flowing granular detergent prodn. - by extruding mixt. of detergent components and plasticiser and/or lubricant through bores in ceramic plate C01.122299	D25 HENK 09.03.90 *DE 4007-601-A	D(11-D3)
A mixt. of at least partly solid detergent components with added plasticiser and/or lubricant is extracted under at least 25 bar pressure through concentric rows of bores (6) in a circular plate formed of ceramic. Each bore has an inlet zone (7) of length:dia. ratio from 1.5-6.0 and followed, after an intermediate sloped connection (9) angled at 20-85 (esp. 40-80) $^{\circ}$ by an outlet zone (8) of smaller dia. and with length:dia. ratio from 0.3-2. Extrusion temp. is 25-75 (esp. 30-70) $^{\circ}$ C and the emerging strands are abruptly air-cooled during and or before their immediate formation by a rotary cutter into small lengths of regular sized granulate.	For fabric washing processes. Granules are uniformly sized and free-flowing. (17pp1480DAHDwgNo9/11).	<p>Diagram illustrating the cross-section of a ceramic plate with concentric rows of bores for detergent production. The plate features a central inlet port (29) connected to a series of bores arranged in three concentric circles. Each bore consists of an inlet zone (7), a sloped intermediate connection (9) angled at 20-85 degrees, and an outlet zone (8). Arrows indicate the flow path from the inlet port through the bores.</p>